

EDUCATION

**THE US ARMY
SIGNAL SCHOOL
APPRENTICESHIP
PROGRAM FOR
THE TRADE OF
ELECTRONICS
MECHANIC
(COMPUTER)**

Headquarters
Department of the Army
Washington, DC
1 August 1982

UNCLASSIFIED

SUMMARY of CHANGE

DA PAM 621-97

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF ELECTRONICS
MECHANIC (COMPUTER)

This change 1--

- o Adds MOS 34H to the Electronics Mechanic (Computer) Apprenticeship Program.
- o Changes page 1, paragraph 5, Add F. MOS 34H: Automatic Digital Message Switch Repairer.

EDUCATION

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF ELECTRONICS MECHANIC (COMPUTER)

By Order of the Secretary of the Army:

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History. This publication was originally printed on 15 July 1981. It was authenticated by Robert M. Joyce, Brigadier General, United States Army Adjutant General, and E. C. Meyer, General, United States Army Chief of Staff. Change 1 to this regulation was

printed on 1 August 1982 and was authenticated by Robert M. Joyce, Brigadier General, United States Army Adjutant General, and E. C. Meyer, General, United States Army Chief of Staff. This electronic edition publishes the basic 1981 edition and incorporates Change 1.

Summary. Not applicable.

Applicability. This pamphlet applies to all elements of the Active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

Proponent and exception authority. The proponent agency of this pamphlet is The Adjutant General's Office.

Interim changes. Interim changes to this pamphlet are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905.

Distribution. To be distributed in accordance with DA Form 12-9A requirements for DA Pamphlets, Education:

Active Army:—B

ARNG:—None

USAR:—None

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1. Purpose.

The purpose of this pamphlet is to announce the US Army Signal School Apprenticeship Program for the Trade of Electronics Mechanic (DOT Code 828.281-010).

2. Applicability.

This pamphlet applies to all elements of the Active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

3. General.

Policies and procedures for participation in the program are contained in AR 621-5. This pamphlet is designed to be used in conjunction with that regulation.

4. Apprenticeship Program Number and Occupational skill Code.

a. The following apprenticeship program number and occupational skill code are used to identify the US Army Signal School Apprenticeship Program for the Trade of Electronics Mechanic, (Computer).

(1) Apprenticeship Program Number: 99904.

(2) Occupational Skill Code: 12.

b. The apprenticeship program number and occupational skill code must be entered on DA Form 4409-R (Apprenticeship Application) to identify the program for which the soldier is making application.

5. Eligibility for Participation in the Program.

Soldiers holding as primary or secondary, one of the MOSs indicated below and serving in the MOS may participate in the program.

a. MOS 34C: Decentralized Automated Service, Support System, Repairer.

b. MOS 34E: NCR 500 Computer Repairer.

c. MOS 34F: DSTE Repairer.

d. MOS 34J: UNIVAC 100/1005, DCT 9000 System Repairer.

e. MOS 34K: IBM 360 Repairer.

f. MOS 34H: Automatic Digital Message Switch Repairer.

6. The Electronic Mechanic Computer Apprenticeship Program.

This is an 8,000-hour program which leads to certification as journeyworker in the trade of Electronics Mechanic (Computer). Participation in the program is voluntary, and no membership in labor unions or professional associations is required. The work process schedule and schedule of related instruction for the trade are attached (app B and C). The purpose of the work process schedule and the schedule of related instruction are as indicated below:

a. The work process schedule reflects categories of work experience required by soldier-apprentices to qualify as journeyworker and hours of work experience required in each category.

b. The schedule of related instruction identifies courses which may be taken by soldier-apprentices to satisfy the 576 hours of related instruction required for completion of the program.

7. Enrollment in the Program.

Soldiers may enroll in the program by contacting their installation education services officers (ESOs) who will explain requirements of the program and assist in the preparation of the apprenticeship application form (DA Form 4409-R).

8. Apprentice Log Forms.

Apprentice log forms and instructions on use of forms will be issued to soldiers by installation ESOs at the time of registration in the program. Log instruction sheets will be maintained by soldiers in a three-ring binder. Soldier-apprentices will be required to annotate their work experience on log sheets on a daily basis. The standard for the amount of work experience logged will be 132 hours per month. Hours logged above this standard amount must be justified in the remarks section of the daily work experience record and attested to by the signature and rank of the shop craft supervisor or an individual holding a comparable position. Log entries must be verified by the soldier-apprentice's immediate supervisor on a weekly basis.

9. Credit for Previous Experience.

a. Newly enrolled soldier-apprentices who have partially completed an approved Federal or State registered civilian apprenticeship in the trade of Electronics Mechanic (Computer) or a related trade will, upon presentation of documentation, be awarded credit for all experience related to categories of work process schedule at appendix B.

b. Up to 4,000 hours of credit for previous military work experience may be awarded upon presentation of authenticated documentation of satisfactory performance. Such experience must be directly related to the occupation in which the apprenticeship is being performed. Statements from previous supervisors or other such documentation which

certify category of work, number of hours by category, and quality of performance will be submitted by soldier-apprentices to their installation ESOs for consideration. ESOs will forward these documents to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905 for final determination.

10. Related Instruction Credit for Previous Military and Civilian Education.

Credit for previous military and civilian education may be awarded to satisfy related instruction requirements by presenting certificates of course completion or other such documentation from official military records or other sources. The installation ESO will determine the amount of credit to be awarded. The ESO will consult sponsor Service schools, as required, to determine the appropriate amount of credit for each course not listed in appendix C of this pamphlet.

11. Completion of the Program.

Upon successful completion of the program, a Certificate of Completion of Apprenticeship will be awarded by the US Department of Labor. While the award of a Certificate of Completion of Apprenticeship will not guarantee a job, it will certify that journeyworker status has been attained, and should enable completers of the program to be more competitive with civilians in the trade.

12. Partial Completers.

Soldiers leaving the Service prior to completion of the program will receive documented credit for that portion of the program which they did complete. This documentation may be presented for satisfaction of requirements of civilian apprenticeship programs in the trade of Electronics Mechanic (Computer) or a related trade. See appendix D.

Appendix A

REFERENCES

Section I

Required Publications

This section contains no entries.

Section II

Related Publications

This section contains no entries.

Section III

Prescribed Forms

This section contains no entries.

Section IV

Referenced Forms

This section contains no entries.

Appendix B

WORK PROCESS SCHEDULE FOR THE TRADE OF ELECTRONICS MECHANIC (COMPUTER)(DOT CODE 828.281-010)

B-1. Work Process Schedule for the Trade of Electronics Mechanic (Computer)

Paragraph not used.

Table B-1

WORK PROCESS SCHEDULE FOR THE TRADE OF ELECTRONICS MECHANIC (COMPUTER)

	Hours
A. Orientation to Computer Systems and Equipment, such as Console Control Panels, Memory Devices, Processors, Page Printers, Card Punchers, Sending and Receiving Units, Universal Keyboards, and Peripheral and Terminal Apparatus, Test Equipment, Operations, Maintenance and Repair Techniques and Processes	1,600
1. Apply shop practices for proper use, maintenance care and storage of test equipment.	
2. Employ safety practices as outlined in established procedures pertaining to voltage and moving mechanical parts.	
3. Develop workshop and component equipment cleaning techniques.	
4. Observe experienced repairer and participate in the identifications, use, care and storage of handtools and specialized trade tools.	
B. Troubleshoot Computer Equipment Using Standard Diagnostic Methods, Procedures and Test Equipment	2,000
1. Study circuit diagrams and check processed cards and tapes.	
2. Interpret circuit and schematic diagrams, technical literature and related documents.	
3. Identify location and purpose of components, subassemblies, and auxiliary equipment.	
4. Determine malfunctions and locations of mechanical and electrical components.	
5. Determine waveform, wave length, voltage amplification.	
6. Determine faulty components by direct current measurements, AC and DC voltage measurements, and resistance measurements.	
C. Inspect and Repair Electrical and Mechanical Computer Equipment and Components	2,000
1. Utilize and follow blueprints, diagrams and manufacturer's specifications.	
2. Compute voltage amperage and resistance factors.	
3. Disassemble malfunctioning equipment and replace family components.	
5. Inspect, adjust and align repaired components.	
6. Prepare and file maintenance and repair records.	
D. Final Test Operate Equipment with Standard and Specialized Test Instruments	2,000
1. Ohmmeters.	
2. Vacuum tube voltmeter.	
3. Oscilloscopes.	
4. Transistor checks.	
5. Flip-Flop circuit checkers.	
6. Pulse code board testing devices.	
7. Pulse code testing devices.	
8. Pulse generators.	
9. Multimeter.	
E. Perform Organizational and Preventive Maintenance as Required	400
1. Perform visual inspection.	
2. Clean machine, equipment, test equipment and tools.	
4. Lubricate per requirements and as necessary.	
TOTAL	8,000

B-2. Title not used.

Paragraph not used.

Appendix C

SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF ELECTRONICS MECHANIC (COMPUTER)(DOT CODE 828.281-010)

C-1. Schedule of Related Instruction for Trade of Electronics Mechanic (Computer)

A total of 576 hours of related instruction is required to complete this program. Completion of any one or combination of the below listed courses which equals 576 hours of related instruction or more may be taken to satisfy this requirement. Credit for courses not listed below may be awarded upon presentation of authenticated documentation of satisfactory completion. A synopsis of the course must be submitted with documentation. Documentation and synopsis for courses not listed below will be forwarded by ESOs to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905.

Table C-1
SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF ELECTRONICS MECHANIC (COMPUTER)

Course Number	Course Title	School	Resident	Non-resident	Credit Hours
A. 150-35020	Automatic Data Processing Repair (ADP)	USASC	X		1350
B. Phase 1	Automatic Data Processing Repair-Computer Technology	USASC	X		675
C. Phase 2	ADP Repair-Card Processing U-1005 and 1004/ DLT-6d Support Repair	USASC	X		678
D. Phase 3	Automatic Data Processing Repair-NCR 500 Computer Repair	USASC	X		678
E. Phase 4	Automatic Data Processing Repair, Equipment	USASC	X		304
F. Phase 5	Repair ADMS Peripheral	USASC	X		734
G. Phase 6	Automatic Data Processing Repair, ADMS Equipment Repair	USASC	X		338
H. Phase 7	(ADP) Automatic Digital Message Switching Center (ADMSE) Repair	USASC	X		745
I. 150-34E20	Automatic Data Processing(ADP) Repair Digital Subscriber Terminal Equipment	USASC	X		745
J. 150-34E-20/30	NCR 500 Computer Repair(Prior to 1 January 1980)	USASC	X		913
K. 150-34H20	NCR 500 Computer Repair(after 1 January 1980)	USASC	X		1457
L. 150-34L20	Automatic Digital Message Switch Equipment Repair(ADMSE)	USASC	X		800
M. 150-34-20/30	ADMS Peripheral Equipment Repair	USASC	X		1100
N. 150-34F20/30	Digital Subscriber Terminal Equipment Repair(DSTE)(Prior to 1 January 1980)	USASC	X		849
O. 150-34C20/30	Digital Subscriber Terminal Equipment Repair(DSTE)(after 1 January 1980)	USASC	X		255
P. 6-20	Decentralized Automated Services Course	Factory		X	112
Q. 6-21	Tabular Equipment Repair Course(MOS 34B10)	USASC		X	112
R. 6-22	NCR 500 Computer Repair Course(34E20)	USASC		X	113
S. 6-23	DSTE Repair Course(34E20)	USASC		X	122
T. SSO 036	ADMSE Repair Course(34H20)	USASC		X	8
U. SSO 071	Introduction to Automatic Data Processing(ADP)	USASC		X	4
V. SSO 072	Introduction to Automatic Data Processing(ADP)	USASC		X	5
W. SSO 078	Automatic Data Processing Equipment	USASC		X	6
X. SSO 099	Automatic Data Processing Management, Research, Strategies, Analysis and Design	USASC		X	3
Y. SSO 100	Basic Mathematics	USASC		X	6
Z. SSO 301	Algebra	USASC		X	12
AA. SSO 302	Electrical Fundamentals-DC	USASC		X	10
BB. SSO 303	Magnetism and	USASC		X	9
CC. SSO 304	Electrical Fundamentals-AC	USASC		X	11
DD. SSO 308	Electrical Networks	USASC		X	6
EE. SSO 309	Introduction to Electricity	USASC		X	10
FF. SSO 313	Introduction to Electronics	USASC		X	7
GG. SSO 314	Semiconductor Devices	USASC		X	10
HH. SSO 391	Semiconductor Applications Systems	USASC		X	11
II. SSO 362	Digital Circuit Fundamentals	USASC		X	9
JJ. SSO 362	Basic Test Equipment Operation and Mechanics' Hand Tools	USASC		X	12
KK. SSO 468	Basic Test Equipment Operation (SOJT)	USASC		X	4
LL. SSO 468	Test Meters Operation	USASC		X	4
MM. SSO 575	Test Meters Operation (SOJT)	USASC		X	4
NN. SSO 650	Punched Card Operation	USASC		X	3
OO. SSO 651	Safety and Preventive Maintenance	USASC		X	3
PP. ISO 201	Shop Practices and Safety	USASC		X	4
	Automatic Data Processing in the Army	USASC		X	

Table C-1
SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF ELECTRONICS MECHANIC (COMPUTER)—Continued

Course Number	Course Title	School	Resident	Non-resident	Credit Hours
QQ.ISO 201	Basic Automatic Data Processing	USASC		X	2
RR.QMO 567	DSU Mechanized Stock Control	ISAQS-FL		X	6
SS. None	Common Basic Electronic Training(COBET)	ATS Ft. Jackson	X		120
TT. None	Basic Electronic Training(BET)	USASC	X		320

C-2. Title not used.

Paragraph not used.

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